

The opinion in support of the decision being entered today was ***not*** written for publication and is ***not*** binding precedent of the Board.

Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HOWARD HUSS,
ELDON EADY and JAMES VARNEY

Appeal No. 2004-0303
Application 09/439,457

HEARD: March 2, 2004

Before WARREN, DELMENDO and PAWLIKOWSKI, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

Decision on Appeal and Opinion

We have carefully considered the record in this appeal under 35 U.S.C. § 134,¹ including the opposing views of the examiner, in the answer, and appellants, in the brief, supplemental brief and reply brief, and based on our review, find that we cannot sustain the rejection of appealed claim 1,² the sole claim in the application, under 35 U.S.C. § 103(a) as being unpatentable over Fingar, Jr., et al. (Fingar) in view of Schoenmeyr and Dettmann et al. (Dettmann).³

¹ It is apparent from the record that appealed claim 1 has been at least twice rejected. *See* 37 CFR 1.191(a) (2002).

² See the appendix to the brief.

³ Answer, pages 3-5. *See also* the non-final action mailed August 14, 2002 (Paper No. 17).

In order to establish a *prima facie* case of obviousness, the examiner must show that some objective teaching, suggestion or motivation in the applied prior art taken as a whole and/or knowledge generally available to one of ordinary skill in this art would have led that person to the claimed invention as a whole, including each and every limitation of the claims arranged as required by the claims, without recourse to the teachings in appellants' disclosure. *See generally, In re Rouffet*, 149 F.3d 1350, 1358, 47 USPQ2d 1453, 1458 (Fed. Cir. 1998); *Pro-Mold and Tool Co. v. Great Lakes Plastics Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1629-30 (Fed. Cir. 1996); *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Fritch*, 972 F.2d 1260, 1265-66, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992); *In re Laskowski*, 871 F.2d 115, 10 USPQ2d 1397 (Fed. Cir. 1989); *In re Fine*, 837 F.2d 1071, 1074-76, 5 USPQ2d 1596, 1598-1600 (Fed. Cir. 1988); *In re Dow Chem. Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531-32 (Fed. Cir. 1988).

In giving the claim terms their broadest reasonable interpretation in light of the written description in the specification as interpreted by one of ordinary skill in this art, *see, e.g., In re Thrift*, 298 F.3d 1357, 1364, 63 USPQ2d 2002, 2006 (Fed. Cir. 2002); *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989), the plain language of appealed claim 1 specifies a method for making an injection molded pump diaphragm which has one side resistant to chemicals, comprising at least steps which result in injection molding a first diaphragm layer, applying an adhesive to a side of the first layer, placing the layer with the adhesive in a mold and injection molding a second diaphragm layer thereon, wherein the polymer material used to prepare the first diaphragm layer has a higher melt temperature than the polymer material used to prepared the second diaphragm layer, one of the layers being resistant to chemicals.

The examiner correctly finds that Fingar discloses a process of preparing a two layer pump diaphragm wherein the polymer material used to prepare the first layer is chemical resistant polytetrafluoroethylene (PTFE) which has a higher melt temperature than the thermoplastic elastomeric blend of a thermoplastic material and a fully vulcanized thermoset elastomer which is the polymer material used to prepared the second layer (answer, page 4; *see also* Fingar, col. 1, line 57, to col. 2, line 15). The difference between the claimed process and

the Fingar process is that in Fingar, the first or PTFE layer is formed by “annealing,” that is, by “any process capable of producing a directly or indirectly measurable reduction in crystallinity of [the] PTFE layer 12, relative to untreated PTFE” (col. 1, lines 59-60; col.; 3, lines 29-48), and not by injection molding.⁴

The examiner finds that Dettmann teaches “the well-known idea of injection molding a resistant layer of PTFE (col 3, ln 55 – col 4, ln 6)” and contends that Fingar and Dettmann are combinable “with respect to molding composites,” with the combined teachings establishing that, *prima facie*, one of ordinary skill in this art would have known, as disclosed in Dettmann, that PTFE can be injection molded and thus would have injection molded the PTFE layer of Fingar (answer, pages 4-5).

We find that the passage of Dettmann relied on by the examiner involves the formation of the “seal carrier” to join two seals (col. 3, lines 43-52), each seal having been formed by sintering and then sintered together (col. 1, line 66, to col. 3, line 7), and includes the here pertinent disclosure to produce

the seal carrier in an injection molding step in which the seal is enveloped by the carrier material. . . . When valves are used for handling aggressive substances, it would be advantageous to make the seal carrier element out of a resistant material, i.e., PTFE. However, the injection molding of PTFE is difficult and can be performed only under special and expensive conditions. Therefore, preferably, the seal carrier is made from an easily moldable PTFE variant [Col. 3, lines 54-64.]

On this basis, we agree with appellants (supplemental brief, pages 3-4; reply brief, pages 2-3) that Dettmann would have disclosed to one of ordinary skill in this art⁵ that the seal layers are formed from PTFE by sintering, not by injection molding, and with respect to this latter processing method, that it is difficult to injection mold PTFE to the extent that it is preferable to

⁴ A discussion of Schoenmeyr is necessary to our decision only to note that we find that this reference discloses that the two diaphragm layers are formed by injection molding different polymer materials which contain the same base material and have the same melt temperature, neither layer being chemically resistant (see abstract; col. 1, line 62, to col. 2, line 20; and col. 3, lines 3-21). *See In re Kronig*, 539 F.2d 1300, 1302-04, 190 USPQ 425, 426-28 (CCPA 1976).

⁵ It is well settled that a reference stands for all of the specific teachings thereof as well as the inferences one of ordinary skill in this art would have reasonably been expected to draw therefrom, see *In re Fritch*, 972 F.2d 1260, 1264-65, 23 USPQ2d 1780, 1782-83 (Fed. Cir.

use “easily moldable” PTFE variants to form the seal carrier. Indeed, in this respect, all that Dettmann discloses is the notion that “the injection molding of PTFE is difficult and can be performed only under special and expensive conditions,” and not the particulars of such method from which it could be determined whether injection molding of PTFE would be an “annealing” process as defined by Fingar.

Accordingly, on this record, we conclude that the combined teachings of Fingar and Dettmann would have provided no suggestion to one of ordinary skill in this art to modify the process of Fingar by injection molding the chemical resistant PTFE diaphragm layer. *See generally, Dow Chem.*, 837 F.2d at 473, 5 USPQ2d at 1531 (“The consistent criterion for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that [the claimed process] should be carried out and would have a reasonable likelihood of success viewed in light of the prior art. [Citations omitted] Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant’s disclosure.”); *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981)(“The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.”). Therefore, we reverse the ground of rejection.

1992); *In re Preda*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968), presuming skill on the part of this person. *In re Sovish*, 769 F.2d 738, 743, 226 USPQ 771, 774 (Fed. Cir. 1985).

The examiner's decision is reversed.

Reversed

CHARLES F. WARREN
Administrative Patent Judge

ROMULO H. DELMENDO
Administrative Patent Judge

BEVERLY A. PAWLIKOWSKI
Administrative Patent Judge

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